

TABLE II
AIR COMPLIANCE INCORPORATED
GTAT/LPOD'S DIESEL FUEL SUPPLEMENT EVALUATION
GAS EMISSIONS

<u>OPERATING CONDITIONS</u>	Reference Fuel ppm	Reference Fuel Plus 20% Bio ppm	Reference Fuel Plus Viscon ppm	Reference Fuel Plus Viscon+20%Bio ppm	Reference Fuel Plus Viscon+10%Bio ppm
<u>NITROGEN OXIDES (NO_x)</u>					
25% Cold Transient Start	340	375	216	203	200
25% Warm Transient Cycle	250	210	184	120	
50% Speed (Steady State)	83	92	55	76	60
50% Transient Cycle	210	233	55	200	170
Warm Idle	95	90	60	65	55
<u>CARBON DIOXIDE (CO)</u>					
25% Cold Transient Start	185	265	130	95	90
25% Warm Transient Cycle	180	190	55	90	
50% Speed (Steady State)	523	525	311	218	320
50% Transient Cycle	245	230	113	120	180
Warm Idle	195	190	300	80	65
<u>TOTAL HYDROCARBON (THC)</u>					
25% Cold Transient Start	160	447	20	40	
25% Warm Transient Cycle	210	660	20	40	
50% Speed (Steady State)	300	590	20	40	
50% Transient Cycle	350	465	20	40	
Warm Idle	200	690	20	40	



GTA Technologies, Inc.

Technical Data Sheet #1104

NO_x Reduction Using Viscon™

Tests have been conducted in California to determine whether use of the Viscon™ additive will reduce emissions of NO_x from diesel engines.

The first set of tests was carried out by the Monterey Bay Unified Air Pollution Control District. The tests were made on a Monterey Salinas Transit Authority bus with a Cummins diesel engine.

Base line NO_x data was taken at 750 RPM and 1800 RPM on August 23, 2001. Viscon™ was added and NO_x data was taken after running the engine for a few minutes. The bus was operated for the following eleven days with Viscon™. NO_x data was taken on September 5, 2001. Use of Viscon™ resulted in a 4% reduction in NO_x at 750 RPM and 3.9% at 1800 RPM on the first day of the test. Reductions in NO_x after eleven days were 18.1% at 750 RPM and 23.8% at 1800 RPM.

The second series of tests were conducted for Las Palmas Oil and Dehydration by Air Compliance Incorporated in Bakersfield, California from October 31, 2001 to November 23, 2001. These tests were run using the diesel engines of a a 100 hp New Holland Front End Loader under several different operating conditions with neat diesel and with diesel and blends of biodiesel. Base line data for diesel and biodiesel blends were acquired during the first six days of the test period. Tests with Viscon™ were carried over the following fifteen days.

Averaged over all operating conditions, NO_x was reduced by about 42% in neat diesel. The reductions were less in the biodiesel blends; 32% in the 20% blend and 38% in the 10% blend.

Data from the tests can be found on the attached sheet titled Table II.

Summary

The tests in California indicated that using Viscon™ in diesel fuels will significantly reduce NO_x emissions. In both test programs, NO_x emissions were reduced more over time using Viscon™.

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